BRUHAT BANGALORE MAHANAGARA PALIKE

NAME OF WORK:-Improvements to Roads and Drains at Jakkur and Srirampura Surrounding Area in Ward No 05 (Jakkur) Byatarayanapura Sub Division

Estimation Cost.Rs 10000000.00

Description of work	Unit	Mesurement No.	L	B	D	Qty	Rate	Amount
KSRRB 300-1. **Earthwork excavation by manual means for roads,** drains & similar works in ordinary soil excavated surface levelled and sides neatly dressed, the disposed earth to be levelled neatly after breaking of clods complete as per specifications(P.No-143 &136 ,I No-19.1&17.4& 17.1) 5km lead= 57+2.0x1.28x5 =69.80								
New Drain								
Telecom Layout								
13th Cross Road	Cum	2	111.00	1.20	1.20	319.68		
New Culvert								
Telecom Layout								
13th Cross Road	Cum	1	6.00	1.80	1.25	13.50		
Drain Desilting								
Telecom Layout								
15th Cross Road	Cum	2	227.00	0.45	0.45	91.94		
Basic rate	130.00							
Area weightage 6%	7.80							
5Km lead & Lift= 57+(2*1.28*5)	69.80							
Sub Total	**207.60**							
Total						**425.12**	**207.60**	**88253.87**
Removing and refixing stone slabs of drains and pointing in CM (1:3) (P.No.27-I.No.5.33)								
Drain (Sides & Bottom)		Width=Perimeter of Drain in U Shape						
Telecom Layout								
15th Cross Road	Sqm	2	227.00	1.80		817.20		
					Sub Total	**817.20**		
					Total	**817.20**		
Deduct 30% for Missing/Damaged						**245.16**		
						572.04		
Consider 30% Qnty for Removing & Refixing						**171.61**		
Basic rate	105.00							
Area weightage 6%	6.30							
Sub Total	**111.30**							
Total						**171.61**	**111.30**	**19100.42**
Providing granite slabs of selected quality roughly dressed havinf a size of 7.5cms thick and fixed in cement mortar (1:6) including fixing curing ete., complete.(P.No.27,I.No.5.31.1)								
Drain (Sides & Bottom)								
for Old Drain	**Sqm**							
Provide 30% Qnty new Granite slab for missing and Damaged		From item no 2				**245.16**		

Description of work	Unit	Mesurement				Qty	Rate	Amount
		No.	L	B	D			
Basic rate	700.00							
Area weightage 6%	42							
Sub Total	742.00							
Total						245.16	742.00	181908.72
KSRRB M2100 PCC 1 KSRRB M2100-10. Providing and laying Plain cement concrete of mix1:3:6 with OPC cement @ 220kgs, with crushed 40mm and down size graded granite metal coarse aggregates @0.89cum and fine aggregates @ 0.46cum, in foundation mechanically mixed, placed in foundation and compacted by vibration including curing for 14 days including cost of materials,labour, HOM curing form work, Scaffolding and Centering complete as per specifications.MORTH Specification No. 2100 Pg no:222 Item no:27.18								
New Drain								
Telecom Layout								
13th Cross Road	Cum	2	111.00	1.20	0.15	39.96		
New Culvert								
Telecom Layout								
13th Cross Road	Cum	1	6.00	1.80	0.15	1.62		
Basic rate	5115.00							
Area weightage 6%	306.90							
Sub Total	5421.90							
Total						41.58	5421.90	225442.60
Providing laying plain/ reinforced cement concrete for side Drains Using M20 nominal mix Concrete with OPC at 300kgs.With 20mm and Down size granite metal coarse aggregate at 0.69cum and fine aggregate at 0.43cum Machne mixed, well compacted for wall and Bottom including centering shuttering,cost of materials,HOM of Machinery,Curing Etc.,Complete Excluding cost of Steel as per morth MORTH specification No. 1500, 1700, 2200. Including Cost of material, Labour, HOM complete as per Specification-WALL & Bottom thickness 15Cm(Item No 37.59.2 page no 271)								
New Drain								
Bottom Raft								
Telecom Layout								
13th Cross Road	Cum	2	111.00	0.90	0.15	29.97		
Side Walls								
Telecom Layout								
13th Cross Road	Cum	4	111.00	0.15	0.90	59.94		
				Sub Total		89.91		
New Culvert								
Bottom Raft								
Telecom Layout								
13th Cross Road	Cum	1	6.00	1.50	0.20	1.80		
Side Walls								
Telecom Layout								
13th Cross Road	Cum	2	6.00	0.20	0.90	2.16		
				Sub Total		3.96		
Basic rate	6670.00							
Area weightage 6%	400.20							
Sub Total	7070.20							
Total						93.87	7070.20	663679.67

Description of work	Unit	Mesurement No.	L	B	D	Qty	Rate	Amount
KSRB M2200-6 Providing T.M.T bars Fe 500 steel reinforcement for R.C.C work including straightening, cutting, bending, hooking, placing in position, lapping and / or welding wherever required, tying with binding wire and anchoring to the adjoining members wherever necessary complete as per design (laps, hooks and wastage shall not be measured and paid) cost of materials, labour, HOM of machinery complete as per specifications. MORTH Specification NO.1600&2200Specification No. Pg No.229 Item No.28.8.2								
For Drain	Cum	From item no.5				89.91		
	kg	Steel assumed 60Kg/Cum of Concrete				5394.60		
	tonne					5.39		
For Culvert	Cum	From item No 05				3.96		
	kg	Steel assumed 90Kg/Cum of Concrete				356.40		
	tonne					0.36		
Basic rate	61365.00							
Area weightage 6%	3681.90							
Sub Total	65046.90							
Total						**5.75**	**65046.90**	**374084.72**
Providing and Fixing pre cast covering Slab made out of CC 1:2:4 with 10cm thick and Finishing cutting ,including form work,curing,including cost of alll materials, labour,hire charges of machinery,loading,unloading,lead and lift,transportation etc ,copmplete. (Data Rate)								
Telecom Layout								
13th Cross Road	Sqm	2	111.00	0.90		199.80		
15th Cross Road	Sqm	2	227.00	0.90		408.60		
Data Rate	**2337.00**							
Total						**608.40**	**2337.00**	**1421830.80**
Providing and Fixing pre cast covering Slab 250mm thick made out of CC 1:2:4 and jelly 20mm Down size with steel reinforcement including form work,curing,including cost of alll materials, labour,hire charges of machinery, loading, unloading, lead and lift,transportation etc ,complete.As per Engineer incha								
New Culvert								
Telecom Layout								
13th Cross Road	Sqm	1	6.00	1.50		9.00		
Data rate	**5418.00**							
Total						**9.00**	**5418.00**	**48,762.00**
KSRB 4-1.6 ; Providing and laying in position **plain cement concrete of Mix 1:2:4** with OPC @ 240kgs, with 20mm and down size graded granite metal coarse aggregates @ 0.878 cum and fine aggregtes @ 0.53cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation, plinth and cills, including cost of all materials, labour, HOM curing complete as per specifications. Specification No. KBS 4.1, 4.2. (P.No-13,I No-4.6)								
For Flagging Course P.C.C								
Telecom Layout								
15th Cross Road	Sqm	4	227.00	0.20	0.10	18.16		
For Flagging Course Coping								
Telecom Layout								
15th Cross Road	Sqm	4	227.00	0.15	0.10	13.62		
Basic rate	5422.00							
Area weightage 6%	325.32							
Sub Total	**5747.32**							
Total						**31.78**	**5747.32**	**182649.83**

Description of work	Unit	Mesurement				Qty	Rate	Amount
		No.	L	B	D			
KSRB 5-14.1 : Providing and constructing load bearing wall with solid concrete blocks having block density not less than 1800kg/m3 having a minimum average compressive strength of 4.00 N/mm2 confirming to IS 2185 (Part 1):2005 and constructed with CM 1:4, as per IS 2572:2005 including cost of all materials labour charges, scaffolding, curing, hire charges of machineries etc., complete as per specifications. KBS No.5.4. (P.No-27,I No-5.26.2) solid concrete blocks of size 400x150x200mm								
For Flagging Course								
Telecom Layout								
15th Cross Road	Sqm	8	227		0.2	363		
					Sub Total	**363.20**		
Add 40% for low lying area						**146.00**		
Basic rate	924.00							
Area weightage 6%	55.44							
Sub Total	**979.44**							
Total						**509.20**	**979.44**	**498730.85**
KSRRB 300-50. Scarifying bituminous course 50mm to 75mm thick along with premix carpet / surface dressing by road roller attached with scarifier without disturbing the base and stacking the debris including cost of all labour charges, HOM of machineries complete as per specifications. MORTH / Chapter 3(P.No.146, I.No.19.56)								
New Road								
Telecom Layout								
13th Cross Road	Sqm	1	111.00	7.20		799.20		
15th Cross Road	Sqm	1	227.00	11.50		2610.50		
Basic rate	39.00							
Area weightage 6%	2.34							
Sub Total	**41.34**							
Total						**3409.70**	**41.34**	**140957.00**
KSRRB 300-58. Compaction of original ground by mechanical means including filling in depression occuring during rolling including cost of all labour, HOM complete as per specifications.(I No-19.64,P No-147)								
Telecom Layout								
13th Cross Road	Sqm	1	111.00	7.20		799.20		
15th Cross Road	Sqm	1	227.00	11.50		2610.50		
Basic rate	6.00							
Area weightage 6%	0.36							
Sub Total	**6.36**							
Total						**3409.70**	**6.36**	**21685.69**
Construction of granular sub-base Grading-V as Sub-base and drainage layer by providing coarse graded crushed stone aggregates of granite/ trap/basalt material, mixing in a mechanical mix plant at OMC, Carriage of mixed material to work site, spreading in uniform layers with motor grader on prepared surface and compacting with vibratory power roller to achieve the 98 % proctor density, complete as per specifications Clause 401 of MORTH V Revision.(I No-20.5,P No-153)								
New Road								
Telecom Layout								
13th Cross Road	Cum	1	111.00	7.20	0.15	119.88		
Basic rate	1882.00							
Area weightage 6%	112.92							

Description of work	Unit	Mesurement No.	L	B	D	Qty	Rate	Amount
Sub Total	1994.92							
Total						119.88	1994.92	239151.01

KSRRB M400-17. Providing, laying, spreading and compacting cushed stone aggregates of granite / trap / basalt to **wet mix macadam** specifications including pre mixing the material with water at OMC in mechanical mix plant carriage of mixed materials by tipper to site, laying in uniform layers with paver in sub-base/base course on well prepared surface and compacting with vibratory roller to achieve the desired density complete as per specifications(P.No-155,I No-20.18)

New Road								
Telecom Layout								
13th Cross Road	Cum	1	111.00	7.20	0.23	183.82		
15th Cross Road	Cum	1	227.00	11.50	0.23	600.42		
Basic rate	1888.00							
Area weightage 6%	113.28							
Sub Total	2001.28							
Total						784.23	2001.28	1569465.82

KSRRB 500-1.Cleaning the existing WBM Road surface including removing of binding materials and other foreign matter with wire brushes and small picks sweeping with brooms or soft brushes and finally dusting with old gunny bags and bar or compressed air to receive bituminous treatment including cost of all materials, labhour, HOM of machineries complet as per specifications.(P.No.158,I.No.21.1)

New Road								
Telecom Layout								
13th Cross Road	Sqm	1	111.00	7.20		799.20		
15th Cross Road	Sqm	1	227.00	11.50		2610.50		
Basic rate	21.00							
Area weightage 6%	1.26							
Sub Total	22.26							
Total						3409.70	22.26	75899.92

KSRRB M500-6. Providing and applying **primer coat** with S.S. bitumen emulsion on prepared surface of granular base such as WMM including cleaning of road surface and spraying primer at the rate of 0.60 kg / sqm using mechanical means complete as per specifications Clause 502 of MORTH V revision(P.No-158,I No-21.6)

	Sqm	From Item No. 15				3409.70		
for old Road Provide 15% Profile Correction	Sqm	from item no 18=(770.00X15%)=115.50				115.50		
Basic rate	28.00							
Area weightage 6%	1.68							
Sub Total	29.68							
Total						3525.20	29.68	104627.94

KSRRB M500-17. Providing and laying **dense graded bituminous macadam** using crushed aggregates of specified grading, premixed with VG30 grade bituminous binder and, transporting the hot mix to work site, laying to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction in all respects complete as per specifications Clause 505 of MORTH V revisionusing 40/60 TPH capacity H.M.P. with Mechanical paver Gr-II (50 mm to 75 mm) with 4.5 % VG-30 Bitumen (P.No-160,I No-21.17.6)

old Road								
for old Road Provide 15% Profile Correction		from item no18=(770X15%)=115.50				770.00		
	Cum		115.50		0.05	5.78		
New Road								
Telecom Layout								
13th Cross Road	Cum	1	111.00	7.20	0.05	39.96		

Description of work	Unit	Mesurement				Qty	Rate	Amount
		No.	L	B	D			
15th Cross Road	Cum	1	227.00	11.50	0.05	130.53		
Basic rate	6045.00							
Area weightage 6%	362.70							
Sub Total	**6407.70**							
Total						**176.26**	**6407.70**	**1129421.20**

KSRRB 500-2.Cleaning the existing black topped surface with brooms,soft brushes and finally dusting with old gunny bags and/or compressed air to receive bituminous treatment including cost of all materials,labhour, HOM of machineries complete as per specifications.(P.No.158,I.No.21.2).

Old Roads								
MCHS Layout								
Cross Road -01	Sqm	1	70.00	5.50		385.00		
Cross Road -02	Sqm	1	70.00	5.50		385.00		
				Sub Total		770.00		
New Road								
Telecom Layout								
13th Cross Road	Sqm	1	111.00	7.20		799.20		
15th Cross Road	Sqm	1	227.00	11.50		2610.50		
Basic rate	5.00							
Area weightage 6%	0.30							
Sub Total	**5.30**							
Total						**4179.70**	**5.30**	**22152.41**

KSRRB 500-7. Providing and **applying tack coat** using 80/100 grade bitumen(VG10) on the prepared black topped surfaces at 2.5 kg per 10 sqm, heating bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM complete as per specifications (P.No-161,I No-21.7)

	Sqm	From Item No. 18				4179.70		
Basic rate	12.00							
Area weightage 6%	0.72							
Sub Total	**12.72**							
Total						**4179.70**	**12.72**	**53165.78**

Providing and laying Bituminous Concrete 40 mm thick with hot mix plant, using crushed aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site, laying with a paver finisher to the required grade, level and alignment , rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction in all respects complete as per specifications.Clause 507 of MORTH V revision as per IRC SP-53-2015 - using 40-60 TPH capacity HMP with mechanical Paver, Gr-II (30-45mm) with 5.4 % of modified bitumen binder consisting of 4.97% VG- 30 bitumen (60/70 grade) 0.43% Plastomeric Thermoplastics (Waste plastic Additive). (P.No-171I No-21.78.12)

Telecom Layout								
13th Cross Road	Cum	1	111.00	7.20	0.04	31.97		
15th Cross Road	Cum	1	227.00	11.50	0.04	104.42		
MCHS Layout								
Cross Road -01	Cum	1	70.00	5.50	0.04	15.40		
Cross Road -02	Cum	1	70.00	5.50	0.04	15.40		
Basic rate	7111.00							
Area weightage 6%	426.66							
Sub Total	**7537.66**							
Total						**167.19**	**7537.66**	**1260206.30**

Description of work	Unit	Mesurement				Qty	Rate	Amount
		No.	L	B	D			
KSRRB M800-13.**Road Marking with Hot Applied Thermoplastic Compound** with Reflectrising Glass Beads on Bituminous Surface/ Concrete Surface: Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads at 250 gms per sqm area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35 standards specified. The finished surface to be level, uniform and free from streaks and holes complete as per specifications. MORTH Specification No. 803(P.No-182,I No-24.15)								
Telecom Layout								
13th Cross Road								
For Centre	Sqm	0.5	111.00	0.10		5.55		
For Edges	Sqm	2	111.00	0.10		22.20		
15th Cross Road								
For Centre	Sqm	0.5	227.00	0.10		11.35		
For Edges	Sqm	2	227.00	0.10		45.40		
MCHS Layout								
Cross Road -01								
For Centre	Sqm	0.5	70.00	0.10		3.50		
For Edges	Sqm	2	70.00	0.10		14.00		
Cross Road -02								
For Centre	Sqm	0.5	70.00	0.10		3.50		
For Edges	Sqm	2	70.00	0.10		14.00		
Basic rate	429.00							
Area weightage 6%	25.74							
Sub Total	**454.74**							
Total						**119.50**	**454.74**	**54341.43**
							Grand Total	**8375517.98**
							GST Charges (12% of estimated cost)	**1005062.16**
							Tender Premium (5% of estimated Cost)	**418775.90**
							DPR Charges (1% of estimated cost)	**100000.00**
							Project management And Consultancy Charges(1% of estimated cost)	**100000.00**
							Miscellenious and rounding	**643.96**
							Total Amount	**10000000.00**
							RUPEES ONE CRORE ONLY	

CERTIFICATE:

1) The work spot has been inspected and found to be necessary
2) The work spot comes under B.B.M.P
3) The provisions made in the estimate are necessary and minimum
4) The estimate is based on C.S.R of 2018-2019,Issue rates and Data Rates.

Technical Sanction
Accorded For Rs 100 lakhs only
Head of A/C P3798
CER NO : 82 Dt: 10.08.2020

Assistant Engineer
BBMP

Assistant Executive Engineer
BBMP

Executive Engineer
BBMP

Asst. Executive Engineer
Project Division
Yelahanka Zone
BBMP, Bangalore - 92

Administrative Approval
Accorded For Rs 100.00 lakhs Only
Head of A/C P3798
CER NO : 59 Dt: 04/12/2020

E.E. (Project)